Notes of Fourth Corrective Action Conference

Iowa Department of Natural Resources, UST Section

Held: **Tuesday, June 29, 2010** at 1:30 in room 5W of the Wallace building

Sites: Two community remediation project (CRP) sites in Climbing Hill, Iowa
LUST No. 7LTV89, Former School Shop Building
LUST No. 8LTU14, Former Gas Station (Benjamin site)

Status: This was the fourth corrective action conference. No further conferences are scheduled.

Synopsis: Participants discussed the report recently submitted by the certified groundwater professional (CGP) and topics emailed to all prior to the conference:

1. Participants agreed upon a monitoring plan for the active drinking water wells.
2. A monitoring plan for the contaminant plume(s) was worked out.
3. Better communication procedures with Climbing Hill residents were proposed.
4. Ongoing water supply issues were discussed.

The CGP will submit a monitoring plan by 7/19/10.

Participating:

Owners/ operators:	Doug Glackin, superintendent of Woodbury Central School District (by phone)
Funding:	James Gastineau with Aon Risk Services (by phone) Neil Searcy and Steve Reinders of GAB Robins (by phone)
DNR:	UST Section: Ruth Hummel, Project Manager; Elaine Douskey, Section Supervisor; Karrie Darnell, observer; Jeff White, Facilitator (all in person) Deb Tinker of Field Office 1 (by phone)
CGP:	Dan Ruppert with Northwest Environmental (by phone)
Other:	Michelle Clausen-Rosendahl, Environmental Coordinator, and Ron Brandt, Environmental Technical, both of Siouxland District Health (by phone)

Funding by James Gastineau of Aon Risk Services

- $551,006 has been spent on the school site.
- $450,802 has been spent on the former station (Benjamin) site.
- The sites should be covered to a combined maximum of $2,000,000.

Agenda by Ruth Hummel of DNR

1. A regular monitoring plan for the active drinking water wells in the area.
2. Additional monitoring plan for the contaminant plumes based on the hydrogeological information obtained to date. The purpose of this monitoring would be to gather necessary data to support a future decision for site closure(s).
3. Communication: how we might better supply project information to all interested parties.
4. Ongoing water supply issues and planning or potentially options for cleanup.

Background and Environmental Work since Last Conference by Dan Ruppert, CGP

- As we discussed in the previous conference, we sampled the Benjamin drinking water well (DWW) for a variety of parameters. We found nitrates at 43 ppm the first time and 31.6 ppm the second time. We stopped assessing that DWW as a potential water source. The DWW is also used to fill a fish pond; the well apparently has excellent capacity.

- We measured water levels in five DWWs and non-drinking water wells (NDWWs); these were all we could access. The water table elevations seem to reflect the topography of the surface and indicate the wells are hydraulically connected.
- The Bank DWW, which supplies water to the beauty shop and the apartment, was tested three times for coliform bacteria; it was found each time. The DWW is very old and has no sanitary seal. The DWW would have to be rehabilitated and chlorinated. I told Pat Benjamin, the beauty shop, and tried to tell the apartment resident about the bacteria. Pat said he is planning to hook these up to his private DWW, the one with the high nitrates.
- We sampled the School DWW (used by the county) and got a hit of a little more than 2 ppb benzene. We sampled twice more and did not find any petroleum hits.
- We researched the geology by looking at all available data and talking with the drillers who installed many of the wells. The water table is at about 30 feet; loess extends to about 55 or 60 feet. A gravel layer, a few inches to a few feet thick, is found at the base of the loess. Till is found beneath the loess; the till gets thinner toward the west. Alluvial sand is found beneath the till. Most DWWs pump from this sand. A salt and pepper sand is above the Dakota Sandstone. Appears the Bank well is the only Dakota DWW.

Discussion:

DNR (UST): The Benjamin DWW has high nitrates and the Bank DWW has coliform. These are private wells, not public wells. Does the Siouxland District Health Department have the authority to regulate the use of these wells or require repair?

Siouxland: To our knowledge, we don't have that authority.

CGP: I am more comfortable with the apartment and beauty shop being hooked up to Pat's DWW than the Bank DWW. High nitrates won't hurt adults. I don't think Pat will spend money to rehabilitate the Bank DWW.

DNR (UST): We cannot support using Pat's well to supply drinking water. The nitrates are too high. We also can't support using the Bank DWW because of the presence of bacteria and the reported poor condition (no sanitary seal). The Bank well should be repaired and rehabilitated or properly abandoned. And we only sampled these wells for a few parameters; there may be other contaminants present in these wells.

Since all the monitoring wells are screened in the loess and we don't have any monitoring wells in the sand, we need to monitor all the DWWs for OA1/OA2. What about semi-annually except for the School DWW? Based on the recent BTEX detection in the School well we would like to see that one sampled quarterly. I think there are 9 DWWs.

GAB: Yes, we agree.

DNR (UST): Moving on to agenda item 2. If we are ever going to close these sites, we also need to monitor the contamination plumes to make sure the plumes are not moving.

Aon: The School DWW is 500 ft from the school UST location. There are active ASTs and USTs only 100 feet from the School DWW. Will the DNR require the assessment of these potential sources?

DNR (UST): We don't have authority to require this. If you are pointing at a potential off-site source, we need compelling evidence such as samples to require an investigation.

CGP: There is a proposed monitoring plan in the report. The water table monitoring wells show plume stability.

DNR (UST): But these monitoring wells are shallow, in the loess. If we ever want to close these LUST sites, we would need additional monitoring wells in the aquifer from which the DWWs withdraw water. Otherwise the sites could stay high risk forever because we don't know where the plume is located or how is behaving.

School: We want the school site separated from the other one. Our site is clean and the CGP recommended reclassification to no action required.

DNR (UST): There isn't enough information at this point to say there is no risk. We just had a hit in a DWW located down-gradient from the school site. We will leave the two sites as one community remediation program until we know more.

CGP: We can install deeper monitoring wells so we are sampling in the actual aquifer. We should particularly evaluate the gravel layer at the lower part of the loess. If we can show that the groundwater plumes are separate, we should be able to split the sites and close the school site. We will need 5 or 6 deep monitoring wells. We might be able to use a GeoProbe for some of the holes. Several holes will need to be more than 60 feet deep and it will take a good driller to set wells in this sand.

Aon: What is the DNR requiring?

DNR (UST): We are discussing the monitoring plan. The contamination plume is currently somewhat defined only by the DWWs. We need to get enough data to determine plume location and to support closure.

Aon: What protocol do we use for monitoring well location?

DNR (UST): Since the Tier 2 model is not appropriate in this geology, we have to discuss the monitoring plan and develop it based upon our expertise. Deb Tinker is a Geologist 3; she used to be with the Geological Survey. Several of us are geologists and certified groundwater professionals.

Aon: I would like a monitoring well between the School DWW and the nearest USTs, but I won't authorize paying for it.

DNR (UST): For the water table monitoring wells, we monitor source wells MW-2A, -21A, and MW117 and 119R and 118 based on the recent increases in TEH. Also any other monitoring wells located near deep monitoring wells. Since MW-16 is not properly constructed for what we want and is partially plugged, we are not recommending it for further sampling.

CGP: Deep monitoring wells should be located between the sources and the active DWWS near MW-122, MW-25, and MW-9. Pat will probably plug the Bank DWW, so we shouldn't need additional monitoring wells for it.

DNR (UST): We would also like to see a deep monitoring well near MW-120.
We would like a DNR geologist to help log the deep wells and set the screened intervals. Deb Tinker, if she is available.
If the Benjamin DWW gets hooked up to more users, we will need a deep monitoring well between the plume and that DWW.

Aon: We do not support providing funding a monitoring well for the Benjamin DWW. We believe we have provided a safe DWW (East Association Well) which should be utilized.
DNR (UST): We have received calls from persons using the Association DWWs. They want better information about what is happening. I recommend we post reports (or parts of reports) on-line at a web site where they can be accessed. If we send reports to the Siouxland Health District, could they be posted at the county building?

Siouxland: I don't know if that building is always open or if there is a place to post reports. I will check and let you know. What about the post office or the bank?

CGP: The bank is not open much. There's not much of a post office there. The beauty shop is only open a few days a week. Also, I spoke recently to a user of the East Association Well. He reported experiencing poor water pressure. Would there be funding to look at that?

Aon: No, according the agreements the Association is responsible for ongoing well maintenance.

DNR (UST): The conference notes will be out later this week. Dan, please use them to propose a monitoring plan and send it out. Let me know if you see any differences in opinion.

Dan, we wish to thank you for the hard work you put into this report. There is a lot of good information here.

Jeff White will begin serving as the DNR project manager for these sites. He and Ruth Hummel will work together, with Jeff handling the day to day work and Ruth providing oversight and backup. Generally, please contact Jeff with reports, information, or questions.

Selected Actions and Schedule:

- DNR sends out conference notes by 7/6/10.
- CGP will submit a monitoring plan with proposed monitoring well locations and depths by 7/19/10.
- Jeff White will be the designated DNR project manager.

Everyone agreed to this approach and schedule.

Note: The submittal date for the monitoring plan was worked out after the close of the conference.

Jeff White, Conference Facilitator

Note: These notes are generalizations of ideas and comments made by participants in the meeting. They were not recorded verbatim or transcribed. If you have any questions or suggestions, please contact Jeff White at the UST Section of the DNR.